

MR2349-964

Serial Number: 10/689,686

Reply to Office Action dated 27 April 2006

AMENDMENTS TO THE DRAWINGS

The attached Drawing sheet includes a change to Figs. 5 and 6 and replaces the original Drawing sheet that had Figs. 5 and 6 thereon. In Figures 5 and 6, the depiction of the anode and cathode contacts relative to the frame has been corrected.

Attachment: one replacement sheet

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Official Action dated 27 April 2006. Responsive to the rejections made in the Official Action, Claims 1, 3, 4 and 5 have been amended to clarify the language thereof and/or the combination of elements which form the invention of the subject Patent Application. Claims 6-7 were previously canceled and new Claims 8 and 9 have been added.

In the Official Action, the Examiner objected to the Specification due to several informalities therein. Accordingly, the Specification has been amended to correct those informalities kindly noted by the Examiner, as well as several others which were found therein. No new matter has been added by these changes.

A corrected formal Drawing of Figs. 5 and 6 are attached hereto. The replacement Drawing sheet provides corrected illustrations of the conductor contacts for the anode and cathode plates. No new matter has been added by the correction to the Drawings.

In the Official Action, the Examiner rejected Claims 1-5 under 35 U.S.C. § 102(b), as being anticipated by Yamada, et al., Japanese Patent Publication JP2002-184329.

Before discussing the prior art relied upon by the Examiner, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. The invention of the subject Patent Application is

directed to a field emission display having a self-adhesive frame. The display includes a cathode plate having a plurality of cathode conductors disposed thereon, and an anode plate having a plurality of anode conductors disposed thereon. The anode plate is disposed in spaced overlaying relationship with respect to the cathode plate. The display further includes a frame disposed between the cathode and anode plates and has an enclosed space formed internal to the frame between the cathode and anode plates. The frame includes a main body having a closed contour to define the enclosed space. The main body has a cathode plate sealing surface and an opposing anode plate sealing surface. The frame includes a first adhesive disposed on the cathode plate sealing surface and the anode plate sealing surface for sealing the enclosed space responsive to an application of heat thereto. The frame includes a plurality of fixing side strips extending outwardly from an outer side of the main body. Each of the fixing side strips has a cathode plate facing surface and an anode plate facing surface. The frame further includes a second adhesive disposed on the cathode plate facing surface and the anode plate facing surface of each of the plurality of fixing side strips. The second adhesive is adapted for bonding the frame to the cathode and anode plates without the use of heat. The second adhesive is removed by the application of heat to seal the enclosed space. The frame, the cathode plate and the anode plate are maintained in registration by bonding of the second adhesive the first adhesive seals the enclosed space.

In contradistinction, the Yamada, et al. reference is directed to a field emission display comprising a low temperature metallic seal. The reference recognizes a problem of generating air bubbles when a glass frit type seal is heated to 400°C, or more. In order to solve the problem, the reference utilizes a low temperature melting metal as the final sealant for the enclosure. The field emission display includes a front substrate 11, a tooth-back substrate 12 joined to the substrate 11 through a rectangular frame-like side attachment wall 18. The frame 18 is first sealed to the tooth-back substrate 12 utilizing a low melting glass frit 30, paragraphs 27 and 32. Subsequently, the opposing sealing surface of the frame 18 and the perimeter portion of the substrate 11 are coated with the substrate layer 31 over which the indium metal layers 32 are formed. Substrate layer 31 and indium metal layer thereon, formed on the substrate 11, are each provided with four lobes 31a, 32a, to provide for a flow of surplus indium external to the cavity defined by the frame, paragraph 53.

Thus, the frame 18 is not provided with a plurality of fixing side strips extending outwardly from an outer side of the main body, each of the fixing side strips having a cathode plate facing surface and an anode plate facing surface, as now claimed. Further, while the frame (18) utilizes two different adhesives, one (30) for joining the frame to substrate 12 and another (32) for joining that assembly (12 and 18) to the substrate 11, the reference fails to disclose a self-adhesive frame, a frame which is provided pre-coated with the adhesives thereon,

as provided in the instant invention. Further, nowhere does the reference disclose or suggest a first adhesive disposed on the cathode plate sealing surface and the anode plate sealing surface for sealing the enclosed space responsive to an application of heat thereto, as well as a second adhesive disposed on the cathode plate facing surface and the anode plate facing surface of each of the plurality of fixing side strips, the second adhesive being adapted for bonding the frame to the cathode and the anode plates without the use of heat, the second adhesive being removed by the application of heat to seal the enclosed space, wherein the frame, the cathode plate and the anode plate are maintained in registration by bonding of the second adhesive until the first adhesive seals the enclosed space, as now claimed. In fact, the reference teaches away from such an adhesive, in that both the frit and indium metal sealants both require heat and both remain permanently.

Therefore, as the reference fails to disclose each and every one of the elements of the invention of the subject Patent Application, as now claimed, it cannot anticipate that invention. Further, as the reference fails to suggest such a combination of elements, and in fact teaches away from that combination, it cannot make obvious that invention either.

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For all of the foregoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
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